RESISTANCE TOWARDS WIKI FOR COLLABORATIVE LEARNING AMONG UNDERGRADUATES

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ABSTRACT

Wiki is an asynchronous online collaborative tool which can be used to for teaching and learning purposes. This study explored the issues related to undergraduates' resistance inusing Wiki for collaborative learning. Findings revealed that students' resistance were related to the technical constraints of Wiki, students' commitment and interest towards the course, initial hands-on exposure to Wiki, and also the importance of peer contributions.

Keywords: Wiki, collaborative learning.

INTRODUCTION

Web-based collaborative tools offer an interesting and innovative learning environment which expands the potential of interaction, knowledge-sharing ability and facilitates the learning activities. Collaborating allow two or more individuals to learn together and share information when working with each other. Collaborative learning, which is a student-centred approach can be seen as an alternative to traditional classroom teaching method where

student are creators of their own knowledge rather than passively receiving knowledge from the instructor.

This paper focuses on collaborating using technology, namely wiki, for teaching and learning purposes in a higher-education context. It will also highlight the issues surrounding the use of wiki for collaboration purposes, particularly the reason behind students' resistance in participating in the class Wiki.

LITERATURE REVIEW

Wiki as a mean to support collaborative learning

Wiki, a type of web-based collaborative tool, or Web 2.0, allows user to work together in a space provided where everyone is able to create a new wiki page, add, edit, or delete any content in the existing wiki. The core characteristics of Web 2.0, according to O'Reilly (2007) was "trusting users as co-developers and harnessing collective intelligence" (p.37). Wiki was created by Howard Cunningham in 1995 as a system for developing private and public knowledge bases (Leuf & Cunningham, 2001, in Lund, 2008). Wiki is an asynchronous and simple web-based collaborative authoring system which can be defined as "a webpage or set of web pages that can be easily edited by anyone who is allowed access" (Ebersbach, Glaser & Heigl, 2006, in Anderson, 2007). One of the most well-known Wiki available is Wikipedia (www.wikipedia.org), which is a free online encyclopaedia where everyone can be an author and contribute to the pages. The characteristics of wiki allow users to work together, communicate with each other, and share files or documents regardless of their geographical location and time. Users do not need to have extensive technological skills in order to use wiki, thus making it easy to use for anyone with basic computer competencies. Apart from that, wiki can easily be accessed using the web browser, without the need to install any third-party software which makes it easily accessible by everyone with an Internet connection.

Although wiki was not specifically created for education purposes, however, it can be utilized to accommodate and enhance the learning experience due to the flexibility, adaptability and interactivity of its nature. Instructors need to keep in mind that it is not

enough to simply add a Wiki into a course with a traditionally designed content and expect students to automatically participate, but the course content needs to be explicitly redesigned around Wiki use (Cole, 2008, p.144). Apart from that, it is important for course instructor to provide necessary resources to the students, such as class lectures, notes and assignments so that they have the information and guidelines needed to work on the virtual instructional activities. As suggested by Cole (2008), "course instructors need to provide some form of instructional scaffolding in using Wiki in order for them to be able to use it."

Past studies have been conducted on the implementation of wiki for teaching and learning purposes (Elgort, Smith & Toland, 2008; Franco, 2008; Hughes & Narayan, 2009; Woo, Chu, Ho & Li, 2009; Zorko, 2009; Li, Chu, Ki, Woo, 2010; Miyazoe, 2010; Chong, Tan & Abdullah, 2011).The studies found that Wiki is beneficial in assisting group work and encouraging better individual participation, and interactions among group member in wiki enhanced the progress of group work (Elgort et al.,2008). Another study by Franco (2008) examining wiki activities for writing purposes reported that students' writing opportunities were maximized, interest and motivation were increased, writing skills were improved, and they learned cooperatively instead of competing with each other. The commenting feature in wiki enabling fellow students or an instructor to write commentson to students' work, was proven useful in helping them to learn (Woo et al., 2009; Zorko, 2009). This causes students to be more aware of their writing process, and motivates them to perform better due to the public nature of wiki.

Factors Influencing Effective Integration and Use of Wiki

There are various factors that influence students' participation and engagement in Wiki. The identified factors were:

1. Learner Characteristics

The most important learner characteristic was their knowledge about and skill in usingbasic computer applications and Internet technology which were among the most basic skills needed to operate a wiki. Students' demographic background, such as year born was also important as young learners or "digital natives" often possesses the familiarity and

ability to use the Internet technology in their daily lives.

2. Off-campus access to the Internet

Wiki is an online-based application, so it is crucial forlearners to have access to the Internet,during or outside of the classroom time.

3. Initial hands-on exposure and technical feasibility of Wiki

Although Wiki was considered a fairly easy technological tool to use, however, it is important for instructors to provide training to students at the beginning of the course, especially when the students are first-time users in order for them to familiarize with the features and functions. As stated by Cole (2008), "even students who are competent and familiar with computers, and those with the digital natives characteristics needed some guidance and tuition in using Wiki" (p.144). When students are given training before they start and familiarize themselves with the technical features of Wiki, this may avoid any fears or confusion later on, thus providing greater probability of them in making contributions.

4. The importance of peer contributions

Peer contributions in Wiki have the ability to motivate the rest of the class members to contribute to the class Wiki. This phenomenon could be related to the concept of *community of practice*(Lave and Wenger, 1991) in which students in such courses consider themselves to be active participants in course communities and thus feel responsible to assist in each other's learning by contributing knowledge they have gained from readings and Internet searching with their peers. Through such participation, as the course develops these students can gradually form a social learning group to support each other's development via wiki.This was in line with a study by Lund (2008), "where Wiki were able to support collective knowledge construction among students instead of attempting to make sense of required material individually." The collective knowledge was constructed when learners are actively involved in the process of interacting, sharing, and collaborating. In wiki, learners act together as equal entities that complement each other's expertise and weaknesses rather than competing among themselves.

5. The importance of instructors' comments on students' work

According to Woo, et al. (2011), reviewing the work and receiving comment from peers as well as teachers may help students in their writing activities. This is because sharing ideas and giving and receiving critical feedback from peers and teachers could enhancetheir writing confidence. The instructor could also use the commenting feature to provide feedback to the students, and regular instructor feedback could increase students' motivation and confidence in writing. A study by Cubric (2007) found that students value continuous feedback from atutor and that a tutor can increase students' engagement by taking the role of an active reviewer, i.e., by actively reviewing and providing feedback to the students. A study by Mak and Coniam (2008) also found that students produced substantially more text than requiredwhen involved ingroup Wikis,showing that students' writing confidence was increased. Apart from that, the ability to compare and comment on other groups' works affects ones' motivation. It helps students to improve and learn from the better groups and learn from mistakes made by others which could help them not to repeat the same mistakes (Zorko, 2009). This shows that Wiki has anability to provide students with anenvironment capable ofincreasing their confidence.

METHODOLOGY

The study employed a qualitative approach research design, data collection, and analysis. The participants consisted of full-time undergraduates with the age range of 21-22 years old. The course were designed to fit into a blended learning environment setting where wiki was used a tool to support the classroom instruction. Data collection method involved a pre-test survey, direct observation, focus group interviews and students' written reflection.

Participants and context

The participants of this study comprised of eight full-time undergraduates from a public university in Malaysia enrolled in Instructional Design course. All participants were females, with the age of 21 (75%) and 22 (25%) years old. All participants owned a laptop computer and stated that this was their first experience with Wiki (62.5%), while the remaining 37.5% have experienced it prior to the course.

The course was conducted for the duration of 15 weeks, where lectures were conducted face-to-face, and instructional activities were conducted online using wiki. PBworks (www.pbworks.com), an open-sourced online collaborative tool was used as the platform for the online learning activities.

Course Design

The workshop-based course requires students to actively participate in the class activities. Lectures were given during the first half of the class time and the remaining time were used for students to work collaboratively in the class wiki which were available at http://ppea2101.pbworks.com (*Figure 1*). Prior to the start of the collaborative activities, students were given a hands-on training on wiki and allow them to explore the tool. This is a crucial step to ensure that students were given guidance so that they are familiar with wiki to avoid students to shy away due to their incompetency in using it.

Students were required to work together in a small group of two to work on an instructional design project where they will produce an online project and final report. Each group will have their own wiki page in the class wiki. The group pages were viewable by everyone to enable students from other groups to view and provide constructive comments to their peers. Apart from the project, occasional in-class wiki activities were also conducted. Students were required to take part actively in the activities and be responsible for their own learning, while the instructor took the role as a moderator and facilitator to keep the learning process moving.

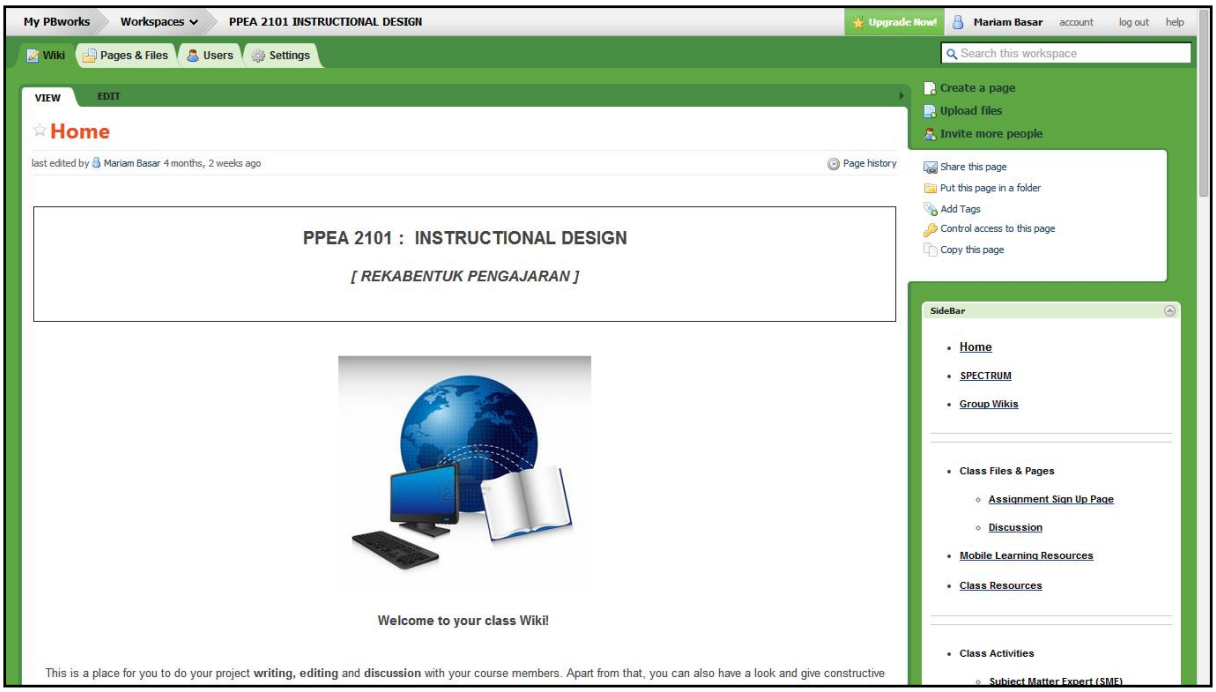

Figure 1: A screenshot of the course wiki

Data Collection Method

A pre-test proficiency survey was conducted during the second week of the course, which was after wiki training has been conducted. The purpose of the survey was to find out about the students' demographic and Information and Communication Technology (ICT) knowledge and background. In addition, the technological equipments owned by students, such as desktop computer, laptop, printer, and many others, were also asked. The survey comprised of two sections: Section A (Personal Data) and Section B (Experience and Academic Profile). There were 5 sub-sections in Section B, which were Learning Style Preference, Communication Style Preference, Level of Computer Competencies, Computer, Internet and Wiki Technology, and Language Proficiency.

Observations were done during classroom time, and also for the activities conducted in the course wiki. Focus group interviews were carried out during the middle of the semester. Students' written reflections during the end of the course were also be analyzed.

FINDINGS AND DISCUSSION

This study attempts to explore the resistance of using Wiki for collaborative learning among full-time undergraduates. Based on the observation of the class Wiki, students did not make any postings or contribution to the Wiki during the early stages of the classroom even after they were informed to start working on their respective group projects. After 2 weeks of not having any postings in Wiki by the students, the course instructor decided to do some online class activities in the class which requires them to post their outcomes and present it in Wiki. This was to encourage students to contribute and take part in the Wiki. As Cole (2008) suggested, "various Wiki activities are required at regular intervals throughout the course to maintain student interest which could provide students visible, and where possible, immediate learning benefits" (p.145). During the first activity, it was found that both groups attached a file from Microsoft Word document into the activity pages and did what they were only told to do and no other communication or collaboration efforts were made. On the second activity, students were required to type and produce their work in the activity page. It was found that students merely added in their answer to the class activity without any additional elaboration. No comments were made by any students. On the subsequent weeks, students were told to work on their projects and post their updates in their group Wiki page. Motivations and words of encouragements were given to the students so that they would keep updating their pages. Again, there was still a lack of contributions from the students. It was observed that the students would discuss among themselves during the workshop period but very minimal postings were made to their group pages. It was also observed that students' postings were made during class time and no postings were made outside of class hours.

The findings suggested that the resistance or lack of participation from the students were due to a few factors, which were technical constraints and difficulties, students' commitment and interest, initial hands-on exposure to Wiki, and the importance of peer contributions.

1. Technical constraintsand difficulties

Focus group interview with the students during the early stages of Wiki revealed that students were facing with technical difficulties when using Wiki and some did not understand how to use it, hence the lack of or zero participations from them. The second focus group interview was conducted on the subsequent week, and students were still having difficulties in using Wiki. Some of the comments were "*I find the features difficult"*, and *"I do not*

understand how to use it and it is hard to use". Students find Wiki difficult to use even after they were given training and online manuals on how to operate Wiki. However, it was unknown why none of the course instructors were contacted when they were having troubles when operating Wiki even though they were constantly reminded to contact the instructors whenever they were facing trouble.

It was also found that some students still find Wiki difficult to use and not user-friendly even until the end of the semester. As what was written in a student's reflection:

"Personally, I do not fancy using it. Even though it may be really good alternative for us to collaborate as well as to share our work and ideas but the site isn't user oriented, for me atleast. For example, commenting is hard to execute" (Student 3, written reflection)

Apart from the technical difficulties, the asynchronous nature of Wiki was also one of the concerns when using Wiki for classroom purposes. A majority of students reported having issues with the technical features of wiki, which is the "steal-lock" feature, where the editing function is locked when another user is working on the same page. Students find it troublesome, a waste of time and eventually they were bored of waiting. This issue was stated by comments made by students:

"It bores me when I have to wait for others to finish their work when working on a page during the class. It is a waste of time as I spent a lot of time waiting for others to complete their work" (Student 1, written reflection)

"... wiki plays an insignificant part in class and I can see the troubles when using it in class. If someone is editing, you have to wait until he or she is finished. I also waste a lot of time in editing and it takes longer time to upload or post my files in the group" (Student 2, written reflection)

Another concern regarding technical issues was the Internet access. Since Wiki is an online-based collaborative tool, it is crucial for users to have access to the Internet, especially during and outside of the classroom hours. The pre-test survey found that all students have access to the Internet ranging from university networks (50%), wireless network at home

(25%), and mobile broadband (25%). Another interesting finding was that not only the access to the Internet is important, but the connection speed plays a huge role too. Some students reported that their Internet connection is slow and the pages took a long time to load. Students commented that "I have very slow connection and afraid to lose my works when I type in Wiki so I use Word application instead" and "it took me a long time to upload my files and sometimes it would not load".

2. Students' commitment and interest

Another reason for the resistance towards Wiki for collaborative writing was students' commitment and interest towards the course some students were busy with meeting deadlines for other courses or doing extra-curricular activities. As what students commented during the third focus-group interview:

"It's not that Wiki is difficult, I just did not open it when I am outside of the classroom" (Student 5, focus group interview).

"It just did not occur to me to open or check on Wiki when I am in the college" (Student 6, focus group interview).

"I do not have time to post because I have a lot of other course works to do" (Student 7, focus group interview).

The reason also may be due to the total lack of interest from the students. Although a majority of students are active social media users, where all reported to spend a few times a day accessing social media sites, especially for leisure and communication purposes, this however could not serve as an indicator of their participation in class Wiki. This may due to how students perceive the purpose or context of the activity in the site, as reported by Cole (2008), where "in an educational context, social technologies such as Wikis are perceived differently compared with ordinary personal use and this discourages student adoption" (p.1). Cole (2008) also stated that "the fun in using technology is determined by the user and students, and they may not view popular social technologies used in education context as either enjoyable or intrinsically useful" (p.145). Therefore, this does not mean that although

students are active in social media and constantly accessing the site, course instructors should not expect the same interactivity and enjoyment from the students in the class Wiki.

3. Initial hands-on exposure to Wiki

As a majority of students (62.5%) were first-time Wiki users, prior training and guidance on how to operate Wiki is very crucial to encourage everyone to contribute and not feeling left out due to their incompetency in using it. A student commented:

"At first I do not have any idea what is Wiki, but after I was given guidance on how to use it, I find it interesting because we can share information, opinions and work at the Wiki page" (Student 4, written reflection).

4. The importance of peer contributions.

Peer contributions in Wiki were one of the factors that motivate the rest of the class members to contribute. Some students were also afraid to be the first to make any comments. Some comments received from students were "*I feel inferior to add or comment anything*" and "*there must be a direct or specific instruction on what we should do in Wiki because we do not know what to write*".

CONCLUSION

The findings of this study revealed that students were hesitant to use Wiki for collaborative writing. Students were found to be passive users of Wiki and only logged into the class Wiki during classroom hours, when needed or asked to, and only to submit the assigned tasks given to them. A majority of the students preferred to use the attachment option to submit their work rather than typing directly into the Wiki pages.

Four factors that affect Wiki participation and engagement among students were identified. They were: technical constraints and difficulties, students' commitment and interest, initial hands-on exposure to Wiki, and the importance of peer contributions.

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